AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 20. (Canceled)

21. (Withdrawn) A method of detaching and collecting an IC tag from a paper sheet to which said IC tag is attached, comprising: a detachment step of detaching said IC tag from said paper sheet by applying external force to an adhesive surface between said paper sheet and said IC tag; and a fractionation step of fractionating the detached IC tag from other substances.

22. (Withdrawn) The method as set forth in claim 21 wherein, in said detachment step, said paper sheet is immersed in an immersion liquid and external force is applied to said adhesive surface by a flow of said immersion liquid.

23. (Withdrawn) The method as set forth in claim 21, further comprising: a fragmentation step of immersing in an immersion liquid said paper sheet from which said IC tag was detached in said detachment step, and disintegrating or fragmenting said paper sheet into paper components by a flow of said immersion liquid and dispersing said paper components in said immersion liquid, said fragmentation step being followed by said fractionation step.

24. (Withdrawn) The method as set forth in claim 23 wherein, in said fractionation step, a suspension in which said paper components are dispersed by the flow of said immersion liquid is passed through a screen.

25. (Withdrawn) The method as set forth in claim 22, wherein a pattern of said flow is changed.

26. (Withdrawn) The method as set forth in claim 21, further comprising: a cleaning step of cleaning said IC tag detached from said paper sheet to remove paper and/or an adhesive adhering to said IC tag.

27. (Withdrawn) The method as set forth in claim 21, further comprising: a preparation step of swelling said paper sheet by causing said paper sheet to hold a swelling liquid in which paper and/or an adhesive is soluble, said preparation step being followed by said detachment step.

28. (Withdrawn) The method as set forth in claim 26 wherein, in said preparation step and/or said cleaning step, said adhesive adhering to said IC tag is decomposed by an enzyme.

29. (Withdrawn) The method as set forth in claim 21 wherein, in said fractionation step, said IC tag is removed and collected from the suspension in which the paper components of said paper sheet are dispersed.

30. (Withdrawn) The method as set forth in claim 29 wherein said suspension is put in a container, said IC tag in said suspension is caused to sink to a bottom of said container, and by supplying a liquid flow containing small bubbles into said container, said bubbles are caused to adhere to said paper components to float them up to a liquid surface of said container.

31. (Withdrawn) The method as set forth in claim 22 wherein heat is applied to said immersion liquid and/or said swelling liquid.

32. (Withdrawn) The method as set forth in claim 21 wherein a plurality of the IC tags are successively processed as one bundle in each of said steps.

33. (Withdrawn) The method as set forth in claim 24 wherein, after collection of said IC tag in said fractionation step, a liquid is squeezed from said suspension and a residual substance of said suspension from which said liquid is squeezed is used as paper material.

34. (Withdrawn) The method as set forth in claim 33 wherein the same liquid is employed in each of said steps, and after collection of said IC tag in said fractionation step, a liquid is squeezed from said suspension and the squeezed liquid is reused in each of said steps.

35. (Currently Amended) A system for detaching and collecting an IC tag from a paper sheet to which said IC tag is attached, comprising:

a unit for swelling said paper sheet by soaking said paper sheet in a swelling liquid in which paper and/or an adhesive is soluble;

a detacher for detaching said IC tag from said paper sheet by applying an agitating stream of the liquid to an adhesive surface between the swollen paper sheet and said IC tag in the liquid, to agitate and separate said IC tag from said paper sheet, and to decompose the paper sheet into paper components; and

a fractionator for fractionating the detached IC tag from ~~other substances by~~ the paper components from said ~~detcher~~ detacher, wherein

said swelling unit pours the liquid, in which said paper sheet and said IC tag are soaked, into said detacher.

36. (Previously Presented) The system as set for in claim 35, further comprising:

a cleaner for said IC tag detached from said paper sheet to remove paper and/or an adhesive adhering to said IC tag.

37. (Withdrawn) An apparatus for detaching and collecting an IC tag from a paper sheet to which said IC tag is attached, comprising: a detaching container for storing a liquid; a solid type screen, which is provided within said detaching container and functions as a filter, for holding said paper sheet to which said IC tag is attached; an agitator for generating a flow of said liquid within said detaching container by agitating said liquid; and discharge ports, formed in side and/or bottom surfaces of said detaching container, for discharging paper components, passed through said solid type screen, of the paper components of said paper sheet fragmented within said solid type screen by said flow generated by said agitator.

38. (Withdrawn) The apparatus as set forth in claim 37, further comprising: a paper-component processing container for holding a suspension that contains paper components passed through said solid type screen, and separating said suspension into said paper components and a liquid; a suspension flow path for supplying said suspension from the discharge ports of said detaching container to said paper-component processing container; a return flow path for returning to said detaching container said liquid separated by said paper-component processing container; and a pump for circulating said liquid between said detaching

container and said paper-component processing container, through said suspension flow path and said return flow path.

39. (Withdrawn) The apparatus as set forth in claim 37 wherein said agitator comprises an impeller and a drive unit for driving said impeller.

40. (Withdrawn) The apparatus as set forth in claim 37 wherein said agitator operates between a first operating state in which a swirl flow of said liquid is generated within said detaching container in a direction of positive rotation and a second operating state in which said swirl flow is generated in a direction of reverse rotation; and when agitating said liquid, said first operating state and said second operating state are switched in predetermined cycles.

41. (Previously presented) The system as set for in claim 35, wherein the detacher immerses said paper sheet and said IC tag in the water while said paper sheet and said IC tag are exposed to agitation by the agitating stream of water.

42. (Currently amended) The system as set forth in claim 41, wherein the agitating stream of water comprises a jet of bubble filled water which decompose the paper sheet into the paper components.

43. (New) The apparatus as set forth in claim 35, wherein the fractionator comprises a liquid filled vessel which is seperate from the detacher and arranged to receive the IC tag and the paper components from the detacher, the fractionator having an agitation unit which agitates liquid in the liquid filled vessel and which separates the IC tag from the paper components and causes the paper components to collect near an upper surface of the liquid.

44. (New) The apparatus as set forth in claim 35, wherein the fractionator comprises a liquid filled vessel in which the detacher is disposed, the detacher comprising a screen which retains the IC tag and which allows the paper components to pass through the screen into the vessel.

45. (New) The system as set forth in claim 35, wherein the unit for swelling the paper which is filled with a swelling liquid, comprises a sluiceway-like arangement along which the paper sheet flows, and wherein the detacher comprises a downstream portion of the sluiceway-like

arrangement which is equipped with an agitation unit to agitate the liquid, separate said IC tag from said paper sheet, and decompose the paper sheet into the paper components.